

Tumanov, I. I.

30-10-17/26

AUTHOR: Tumanov, I. I., Corresponding Member of AN USSR
TITLE: Artificial Climate Station (Stantsiya iskustvennogo klimata)
PERIODICAL: Vestnik AN SSSR, 1957, Nr 10, pp 111-116 (USSR)

ABSTRACT: In 1957, the Institute of Plant Physiology imeni K. A. Timiryazev of the AS USSR established a "Station for artificial climate" in Ostankovo [Moskovskaya o.]. This experimental station is a complex of individual laboratories and halls having various "climatic" conditions. The purpose of the station is to study the behavior and the frost resistivity of various plant species under different climatic conditions. Seven low-temperature refrigerators of 1 m³ generating up to -70°C are used as ice-cabinets. Since these appliances are operating with Freon, a detrimental influence on the plants is out of question. Moreover, there are two large rooms at the disposal of the institute which are developed as ice-safes and in which the frozen test pieces are conserved. Two further refrigerating chambers comprising each a surface of 4.5 sq m exist into which air of various temperatures and moisture content can be admitted. A number of heating chambers, in which any temperatures exceeding +10°C at any humidity content of the air can be

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Artificial Climate Station

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produced, is at the disposal of the scientists. Moreover, adjustable light intensities can be produced in these chambers. All necessary provisions are made in the glass-houses for producing any climate desired, and any rapid falls of temperature. The laboratory is amply equipped with special instruments and special rooms. There are bacteria-resistant operational and storage rooms which can equally be connected with the air conditioning plants. Further there is a separated tract in which only works with radioisotopes are carried out. There are 4 figures, and 3 references.

AVAILABLE:

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Card 2/2

TUMANOV, I.I.; TRUNOVA, T.I.

Effect of growth processes on the hardening capacity of tissues in
winter plants [with summary in English]. Fiziol. rast. 5 no.2:112-122
Mr-Apr '58.
(MIRA 11:4)

1. Institut fiziologii rasteniy im. K.A. Timiryazeva AN SSSR, Moskva.
(Plants--Frost resistance)

REPORT, ..., Mbr., Acad. of Sci. USSR and A. L. KURBANOV, Mbr., Acad. of
Sci. USSR

"Investigations in Plant Physiology at the New Station of the Institute of
Plant Physiology imeni K. A. Timiryazev, AS USSR (equipped with an air-
conditioning plant)."

scientific report presented at the Plenary Meeting of the Department of
Biological Sciences, Acad. Sci. USSR, 16-17 June 1958
(Vest. AN SSSR, 1958, No. 8, p. 57-68)

AUTHOR: Tumanov, I.I., Corresponding Member, AS USSR SOV/26-59-1-28/34

TITLE: The Soviet Phytotron (Sovetskiy fitotron)

PERIODICAL: Priroda, 1959, Nr 1, pp 112 - 117 (USSR)

ABSTRACT: The Soviet phytotron, called "Artificial Climate Station" ("Stantsiya iskusstvennogo klimata"), was established in Moscow-Ostankino by the Plant Physiology Institute of the AS USSR, and started operating in 1957. It is more elaborate than similar foreign installations. It deals with several aspects of plant physiology, such as winter resistance, drought resistance, salt resistance, mineral nutrition, cultivation, electric illumination, variation of climatic factors, cultivation in a bare gravel medium containing various nutritive extracts, etc. The installation consists of two buildings, a main two-storied building with laboratories and experimental substations (Figure 1) with the machinery installed in the basement, and a second building which is to house

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The Soviet Phytotron

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radio isotope laboratories. A daily production of 1,750 tons of specially processed air is expected when the installation is fully operative. A high light intensity for the cultivation of plants under artificial lighting is obtained by the combined use of 500-watt bulbs with neon tubes (40,000 lux). The scorching heat emanating from such a setup is dissipated by an 18-cm-high layer of water on an intermediate translucent ceiling above the plants. The author together with O.A. Krasavtsev worked out a method to make plants resistant to low temperatures exceeding those prevalent on earth. They had special refrigeration systems installed that permitted temperatures up to minus 194°C. Setups for experimenting with isolated plant organs and tissues are also provided. There are 6 photos.

ASSOCIATION:

Institut fiziologii rasteniy im. K.A. Timiryazeva
AN SSSR /Moskva (The Plant-Physiology Institute
imeni K.A. Timiryazev of AS USSR /Moscow)

Card 2/2

TUMANOV, I.I.

First year's work of Soviet phytotron. Izv. AN SSSR. Ser.
biol. no.2:265-282 Mr-Apr '59. (MIRA 12:5)

1. Institut fiziologii rasteniy im. K.A. Timiryazeva AN SSSR.
(VEGETATION AND CLIMATE)

TUMANOV, I.I.; KUZINA, G.V.; KARNIKOVA, L.D.

Effect of photoperiods on the frost resistance of apricots and
black currants. Fiziol.rast. 12 no.4:665-682 J1-Ag '65.

(MIRA 18:12)

1. Institut fiziologii rasteniy imeni K.A.Timiryazeva AN SSSR,
Moskva. Submitted July 15, 1964.

AUTHORS: ~~Tumanov, I. I.~~ Corresponding Member SO7/20-127-6-44/51
AS USSR, Krasavtsev, O. A., Khvalin, N.N.

TITLE: An Increase in Frost Resistance to -253° Attained in Birch and Black Currant by the Hardening Method

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 6, pp 1301 - 1303 (USSR)

ABSTRACT: The investigation of plant hardening could be continued (Ref 1) by the putting into operation of the Stantsiya iskusstvennogo klimata (Station of Artificial Climate) of the Institut fiziologii rasteniy im. K. A. Timiryazeva (Institute of Plant Physiology imeni K. A. Timiryazev). As by stepwise cooling the frost resistance of birch branches was increased to -195° (Ref 2), the authors were faced with the task of producing, by an improved method, plants which do not freeze at even lower temperatures. The Institut fizicheskikh problem AN SSSR (Institute of Physical Problems of the AS USSR) made possible the freezing of branch bundles of some wood plants in liquid hydrogen. The cut-off branches were wrapped in cellophane and placed in refrigerators at -5° . For birch, the temperature was lowered every 24 hours by 5° so that it attained -60° on the

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An Increase in Frost Resistance to -253° Attained
in Birch and Black Currant by the Hardening Method

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11th day. After this hardening process, the bundles were quickly immersed into liquid nitrogen, and left there for 48 hours. Currant was hardened for up to 6 days. From the liquid nitrogen, the branches were transferred to liquid hydrogen where they remained for 2 hours to be transferred subsequently to liquid nitrogen again. The latter was slowly vaporized within 6 days. Thus, the branches were slowly brought up to higher temperatures and finally placed into a greenhouse for budding. After the cooling in liquid hydrogen, all buds of the *Betula verrucosa* developed, also the male and female inflorescences lived on (Fig 1). The branches frozen at -253° were not at all different from the control. The pollen of the "liquid hydrogen" variant germinated in a drop of 5% glucose solution at $+25^{\circ}$ within 2 hours to about 30% (Fig 2) as in the control. The birch branches, however, which were not hardened in the laboratory, were completely frozen at -40° . Similar results were obtained by experiments with 2 species of black currant (Fig 3). The branches frozen at -253° remained only slightly behind in growth. There is reason to assume that the said plants can also be cooled down to the absolute zero without taking harm

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An Increase in Frost Resistance to -253° Attained
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(Ref 3). In another paper (Ref 4), the authors published the results concerning the reason why the branches of wood plants can stand such a low cooling. The plants attained their resistance to frost due to the protection from ice formation in the cells. The ice is formed in the intercellular spaces only. Without hardening the water has not sufficient time to flow into these spaces. The hardening capacity originates in the plants only after they have come into the resting period. P. L. Kapitsa, Academician, facilitated the work with liquid hydrogen; S. A. Borovik-Romanov assisted at the experiments. There are 3 figures and 4 references, 3 of which are Soviet.

SUBMITTED: June 1, 1959

Card 3/3

CHEPELEVSKIY, V., inzh.; TUMANOV, I., inzh.

Unified specifications for the receiving for overhauling, and the
delivery after overhauling of motor vehicles, their parts and units.
Avt.transp. 41 no.10:28-29 0 '63. (MIRA 16:10)

TUMANOV, I.I.; KRASAVTSEV, O.A.; TRUNOVA, T.I.

Survival of winter wheat at -195° as a result of vitrification.

Dokl. AN SSSR 161 no.4:978-981 Ap '65.

(MIRA 18:5)

1. G. Ilen-korrespondent AN SSSR.

TUMANOV, I.I.; TRUNOVA, T.I.

First phase in the frost hardening of winter crops kept in sugar solutions in darkness. [with summary in English]. Fiziol. rast. 10 no.2:176-188 Mr-Apr '63. (MIRA 16:5)

1. K.A. Timiriazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow.

(Plants—Frost resistance)
(Plants, Effect of sugars on)

TUMANOV, I.I.; TRUNOVA, T.I.

Laboratory method for hardening winter wheat against frost
in saccharose solution in the dark. Agrobiologiya no.2:278-281
Mr-Ap '63. (MIRA 16:7)

1. Institut fiziologii rasteniy imeni Timiryazeva AN SSSR, Moskva.
(Plants—Frost resistance) (Wheat) (Sucrose)

TUMANOV, I.I.; KRASAVTSEV, O.A.

Effect of thawing rate on the survival of vitrified cells and hardened plants. Fiziol. rast. 9 no.5:595-606 '62. (MIRA 15:10)

1. K.A.Timiridzev Institute of Plant Physiology, U.S.S.R.Academy of Sciences, Moscow.

(Plants—Frost resistance)

TUMANOV, I.I.; KRASAVTSEV, O.A.

Study of the mechanism of the dying of plants during rapid defrosting. Fiziol. rast. 9 no. 6:718-729 '62. (MIRA 15:12)

1. Timiriazev Institute of Plant Physiology, U.S.S.R.
Academy of Sciences, Moscow.
(Plants, Effect of temperature on)

TUMANOV, I. I.

"Intermolecular aspects of the structural stability of protoplasm
at the temperatures extremes."

UNESCO - International Symposium on the Role of Cell Reactions in Adaptations
of Metazoa to Environmental Temperature.

Leningrad, USSR, 31 May - 5 June 1963

TUMANOV, I.I.; ISAKOV, N.A.; KHVALIN, N.N.

Field installation for determining the frost resistance of plants.
Vest.AN SSSR 32 no.7:69-72 J1 '62. (MIRA 15:7)

1. Chlen-korrespondent Akademii nauk SSSR (for Tumanov).
(Plants--Frost resistance)

TUMANOV, I.I.

Effect of light conditions on fruiting in wheat. Bot. zhur. 46
no.10:1422-1432 0 '61. (MIRA 14:9)

1. Institut fiziologii rasteniy imeni K.A.Timiryazeva AN SSSR,
Moskva.

(Wheat) (Plants, Effect of light on)

TUMANOV, I.I.

Trees will not freeze at an artificial climate station. Priroda
50 no. 3:61-66 Tr '61. (MIRA 14:2)

1. Chlen-korrespondent AN SSSR.
(Trees--Frost resistance)

TUMANOV, I.I., prof., otv.red.; GENKEL', P.A., prof., otv.red.; STROGONOV, B.P., kand.biol.nauk, otv.red.; SAMYGIN, Yu.A., red.izd-va; KASHINA, P.S., tekhn.red.; RYLINA, Yu.V., tekhn.red.

[Physiology of hardiness in plants; frost resistance, drought resistance, and salt tolerance. Transactions of the conference of March 3-7, 1959] Fiziologiya ustoychivosti rastenii; morozoustoychivost', zasukhoustoychivost' i soloustoychivost'. Trudy konferentsii, 3-7 marta 1959 g. Moskva, 1960. 776 p.

(MIRA 13:12)

1. Akademiya nauk SSSR. Institut fiziologii rasteniy. 2. Institut fiziologii rasteniy im. K.A.Timiryazeva AN SSSR, Moskva (for Tumanov, Genkel', Strogonov). 3. Chlen-korrespondent AN SSSR (for Tumanov).

(Plants--Frost resistance) (Plants, Effect of aridity on)
(Plants, Effect of salts on)

TUMANOV, I.I.; KUZINA, G.V.; KARNIKOVA, L.D.

Raising plants on gravel for research purposes. *Fiziol.rast.*
7 no.3:320-325 '60. (MIRA 13:6)

1. K.A. Timiryazev Institute of Plant Physiology, U.S.S.R.
Academy of Sciences, Moscow.
(Plants—Soilless culture)

TUMANOV, I.I.; KRASAVTSEV, O.A.

Hardening northern arboraceous plants by subjecting them to
negative temperatures. Fiziol.rast. 6 no.6:654-667 H-D '59.
(MIRA 13:4)

1. K.A.Timiriazev Institut of Plant Physiology, U.S.S.R.Academy
of Sciences, Moscow.
(Plants--Frost resistance) (Trees)

FRANK, G.M.; VLADAVETS, I., starshiy nauchnyy sotrudnik; TUMANOV, I.I.;
DANISHEVSKIY, G.M., prof.

Biometeorology. Znan.sila 35 no.1:25-27 Ja '60.
(MIRA 13:5)

1. Chlen-korrespondent AMN SSSR (for Frank). 2. Institut fizi-
cheskoy khimii AN SSSR (for Vladavets). 3. Chlen-korrespondent
AN SSSR, direktor fitotrona Instituta fiziologii rasteniy AN
SSSR (for Tumanov).
(Meteorological research) (Bioclimatology)

~~TUMANOV, I.I.~~ BRILLIANTOV, V.V., redaktor; RYKOV, N.A., redaktor;
MADEYNSKAYA, A.A., tekhnicheskii redaktor

[Water supply and air in coal preparation and briquetting factories]
Vodo-vozdushnoe khoziaistvo ugleobogatitel'nykh i briketnykh fabrik.
Moskva, Ugletekhizdat, 1954. 173 p. (MLRA 8:4)
(Coal handling) (Water-supply engineering) (Ventilation)

TUMANOV, I.L., aspirant

Extermination of rodents using "ratindan." Veterinarila
41 no.11:95-97 N '64. (MIRA 18:11)

1. Leningradskiy sel'skokhozyaystvennyy institut.

TUMANOV, I.L.

New traps. Zashch. rast. ot vred. i bol. 8 no.11:46 H '63.
(MIRA 17:3)

1. Glavnyy agronom Novgorodskoy stantsii zashchity rasteniy.

TUMANOV, I.L.

Rodent "reservation." Zashch. rast. ot vred. i bol. 8
no.10:46-47 0 '63. (MIRA 17:6)

1. Glavnyy agronom Novgorodskoy stantsii zashchity rasteniy.

TUMANOV, Ivan Lukich, GARBER, T.N., otv. red.; NADEINSKAYA, A.A., tekhn.red.;
SABITOV, A., tekhn.red.

[Water and air supply in coal preparation and briquetting plants]
Vode-vozdushnoe khoziaistvo ugleobogatitel'nykh i briketnykh fabrik.
Izd.2., perer. i dop. Moskva, Ugletekhizdat, 1958. 199 p. (MIRA 11:9)
(Coal preparation)

TUMANOV, I.L., inzh.

Priming on the basis of polyvinyl acetate emulsion. Der. prom.
14 no.10:3-4 0 '65. (MIRA 18:12)

1. Moskovskiy lesotekhnicheskij institut.

TUMANOV, I.M.; VAKHRAMEYEV, S.A., redaktor

[Booklet on safety measures for workers using pneumatic tools]
Pamiatka po tekhnike bezopasnosti dlia rabochikh, pol'zuiushchikhsia
pnevmaticheskimi instrumentami. 2. izd. Moskva, Gos. izd-vo po
stroitel'stvu i arkhitekture, 1954. 15 p. (MLRA 7:8)

1. Russia (1923- U.S.S.R.) Ministerstvo stroitel'stva. Otdel
tekhniki bezopasnosti i promyshlennoy sanitarii.
(Pneumatic tools--Safety measures)

TUMANOV, I.M.; BELYAEV, B.I., redaktor; KRASIL'SHCHIK, S.I., redaktor;
~~POKER, A.M., tekhnicheskii redaktor~~

[Booklet on safety measures for electric welders] Pamiatka po tekhnike
bezopasnosti dlia elektroavarschikov, 2. izd. Moskva, Gos. izd-vo
lit-ry po stroitel'stvu i arkhitekture, 1954. 25 p. (MLRA 7:8)

1. Russia (1923- U.S.S.R.) Ministerstvo stroitel'stva. Otdel
tekhniki bezopasnosti i promyshlennoy sanitarii.
(Welding--Safety measures)

TUBYANSKIY, G.M.; TUMANOV, I.M.; KOPF, L.M., redaktor; KRASIL'SHCHIK, S.I., redaktor; TOKER, A.M., tekhnicheskiy redaktor.

[Safety measures for metal construction assemblers] Pamiatka po tekhnike bezopasnosti dlia montazhnikov metallicheskih konstruktsii. 2-e izd. Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1954. 42 p. (MLRA 7:12)

1. Russia (1923- U.S.S.R.) Ministerstvo stroitel'stva. Otdel tekhniki bezopasnosti i promyshlennoy sanitarii.
(Building, Iron and steel--Safety measures)

TUMANOV, I.M.

Revolving table for semiautomatic welding of the bottoms of
cylindrical vessels. Bnl.stroi.tekh.13 no.7:16-17 J1 '56.

1.Trest Stal'konstruktsiya.
(Welding)

TUMANOV, I.M.

Removal of oxygen from nitrogen by means of a palladium catalyst.
(MIRA 13'12)
Khim. volok. no. 6:54 '60.

1. Klinskiy kombinat. (Nitrogen) (Oxygen) (Palladium)

TUMANOV, I.P.

Ruptures of the pubic symphysis during labor. Akush. i gin.
39 no.3:121-123 My-Je'63 (MIRA 17:2)

1. Iz kafedry akusherstva i ginekologii (zav. -- chlen-kor-
respondent AMN SSSR prof. K.M.Figurnov [deceased]) Voenno-
meditsinskoy ordena Lenina akademii imeni S.M. Kirova.

TUMANOV, I.P., klinicheskiy ordinatsor

Urinary incontinence arising after rupture of the symphysis
pubis during labor. Akush. i gzn. no.1:128-129 '63.
(MIRA 17:6)

1. Iz kliniki akusherstva i ginekologii (zav. kafedroy chlen-
korrespondent AMN SSSR prof. F.M. Figurnov [deceased]) Voenno-
meditsinskoy ordena Lenina akademii imeni S.M. Kirova.

TUMANOV, I.P. (Leningrad)

Changes and injuries in the symphysis pubis during pregnancy.
Fel'd. i akush. 26 no.6:8-10 Je '61. (MIRA 14:7)
(PREGNANCY, COMPLICATIONS OF) (PUBIC SYMPHYSIS)

"APPROVED FOR RELEASE: 03/14/2001

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CIA-RDP86-00513R001757420011-3"

ABADZHI, Kirill Ivanovich; DRUZHININ, Boris Ivanovich; ISAYEV,
Boris Ivanovich; RUEINOV, A.D., kand. tekhn. nauk,
retsenzent; TUMANOV, L.P., inzh., red.; LEIKINA, T.L.,
red. 1zd-va; PETERSON, M.M., tekhn. red.

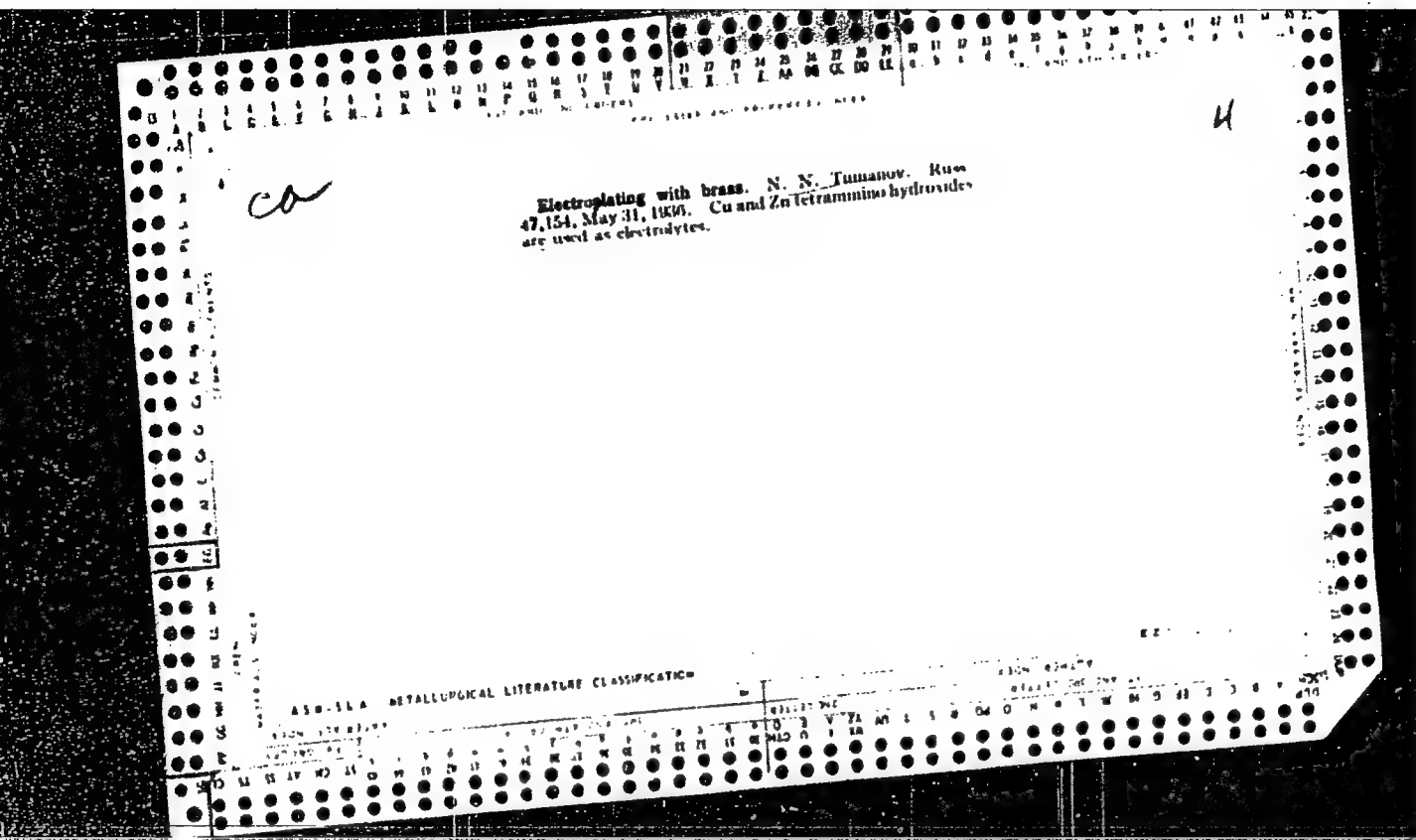
[Checking relative positions of machine-part surfaces]
Kontrol' vzaimnogo raspolozhenia poverkhnostei detalei
mashin. Moskva, Mashgiz, 1962. 113 p. (MIRA 15:10)
(Machinery--Construction) (Measuring instruments)

TUMANOV, L. P., Eng.

Filters and Filtration

Filter for filtering enamel. Vest. mash., 32, No. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED



CH

7

Potassium permanganate. N. N. Tumanov. Russ.
51,390, July 31, 1937. KMnO_4 is prepd. by electrolysis
in a cell equipped with 2 diaphragms; the electrolyte is
fed into the interdiaphragmal space.

AS 55 A METALLURGICAL LITERATURE CLASSIFICATION

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

100 AND 110 COPPER

PROCESSES AND PROPERTIES INDEX

4

CA

Electroplating with copper. N. N. Tumakov. Russ
53,041, Feb. 28, 1938. The plating electrolyte contains a
Cu salt, lactic acid and an alkali metal sulfite. C. d. of
1.5 amp./sq. dm. is used at 2.4 v.

ASB-11A METALLURGICAL LITERATURE CLASSIFICATION

FROM STEINBERG

SECOND WAY ONE ONE

REVISION

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

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701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800

801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900

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Electrodeposition of molybdenum. N. N. Tumanov.
Russ. 63,267, May 31, 1938. A soln. of MoO₃ in fused
cryolite is electrolyzed.

4

Electrolytic production of chlorine and hydroxide. N
N. Tumanov. U.S.S.R. 66,409, May 31, 1910. Elec-
trodes of SiC or of C coated with SiC are used to produce
Cl free of CO₂. M. Hosh

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

4

A

Electrolytic production of perchlorates and persulfates.
N. N. Tumanov. U.S.S.R. 69,700, Nov. 30, 1947.
SiC or SiC-coated C electrodes are used instead of Pt elec-
trodes in this electrolytic process. M. Hosh

TUMANOV, N.N.

Method for analyzing dry lubricating graphite. Elek. i tepl. tiaga no.7:
16 JI '63. (MIRA 16:9)

1. Zaveduyushchiy laboratoriyey elektrodopo Tbilisi.
(Graphite) (Electric locomotives—Lubrication)

YERMAKOV, N.I.; TUMANOV, N.N.

We are checking the thermal stability of lubricating grease. Elek.
i tepl. tiaga 2 no.8:23 Ag '58. (MIRA 11:9)
(Tiflis--Electric locomotives--Lubrication)

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757420011-3

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757420011-3"

TUMANOV, N.S.

New machines for the porcelain and faience industry. Stek. i ker.
19 no. 4140-43 Ap '62. (MIRA 15:8)
(Ceramic industries--Equipment and supplies)

LUK'YANOV, V.I.; MYSLIN, V.A.; SHNEYEROV, A.I.; KHORKHOT, A.Ya.;
YELENSKIY, M.S.; MEL'NIKOVA, O.M.; PLESHKOV, L.Ye.; ORLOV, V.V.;
ZLATOLINSKIY, V.N.; VISHNEVSKIY, F.L.; LAPSHENKOV, P.G.; MAKHOV,
M.S.; HUKAVISHNIKOV, I.D.; LITKIN, K.F.; KOZHEVNIKOV, O.A.;
ZORKIN, G.M.; NORMAN, B.B.; TUMANOV, N.S.; SEREBRYANIKOV, S.M.;
VOLKOV, N.G.; NOVIKOV, P.G.; FRIDBERG, G.V., inzh., red.isd-va;
GELINSON, P.G., tekhn.red.

[Designing chief plans for industrial plants; principal methods]
Proektirovanie general'nykh planov promyshlennykh predpriatii;
osnovnye polozheniia. Moskva, Gos.isd-vo lit-ry po stroit.,
arkhit. i stroit.materialam, 1960. 103 p.

(MIRA 13:6)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut grado-
stroitel'stva i rayonnoy planirovki. 2. Nauchno-issledovatel'skiy
institut gradostroitel'stva Akademii stroitel'stva i arkhitektury
USSR (for Khorkhot, Yelenskiy, Mel'nikova). 3. Gosudarstvennyy in-
stitut proyektirovaniya metallurgicheskikh zavodov (Gipromez) (for
Pleshkov).

(Continued on next card)

TUMANOV, N. S.

"Laying and Repair of Underwater 35-6 kv Power Cables," "Operation of Cable Networks" (Eksplotatsiya kabeley i kabel'nykh setey), Gosenergoizdat, 1949, 384 pp.

TUMANOV, N.S., inzh.

Experience in laying 6-35 kv. underwater cables. Energetik 12 no.10:
18-21 0 '64. (MIRA 17:11)

YAKIMOV, L.K., doktor tekhn.nauk; TUMANOV, N.Ye., kand.tekhn.nauk; KNYAZEV,
A.M., kand.tekhn.nauk

Design of the ash and slag conducting pressure pipelines of electric
power plants. Elek.sta.33 no.1:14-18 Ja '62. (MIRA 15:3)
(Ash disposal)

STRAKHOVSKIY, G.M.; TATARENKOV, V.M.; TUMANOV, O.A.

Maser with two series-connected resonators on ammonia NH_3
(line 3,2). Izv.vys. ucheb.zav.; radiofiz. 6 no.6:1279-1280
'63. (MIRA 17:4)

1. Fizicheskiy institut imeni Lebedeva AN SSSR.

ACCESSION NR: AP4017046

S/0141/63/006/006/1279/1280

AUTHORS: Strakhovskiy, G. M.; Tatarenkov, V. M.; Tumanov, O. A.

TITLE: Ammonia maser with two cavities in series (3, 2 line)

SOURCE: IVUZ. Radiofizika, v. 6, no. 6, 1963, 1279-1280

TOPIC TAGS: maser, ammonia maser, two cavity maser, maser frequency characteristic, maser power characteristic, 3, 3 line maser, 3, 2 line maser.

ABSTRACT: In order to eliminate some of the frequency instabilities which are still present in an ammonia maser with two cavities in tandem (F. H. Reder and C. I. Bickart, Rev. Sci. Instr., v. 31, 1164, 1960) tuned to the (3, 3) line, the authors investigated the feasibility of a similar maser using the (3, 2) line. The ammonia source (channel 10 mm long and 1 mm in diameter), the state separator, and the two cavities were arranged on one line, with the cavities spaced

Card 1/2

ACCESSION NR: AP4017046

10 mm apart. Cavities with identical Q (≈ 8000) were used in the E_{010} mode. With a sufficiently high sorter voltage, (20 kV), the curve of the second-cavity power vs. first-cavity detuning exhibited the typical dip at zero detuning characteristic of the two-cavity maser with the 3, 3 ammonia line, thus demonstrating that the 3,2 line can be used in two-cavity masers. Orig. art. has: 2 figures.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR
(Physics Institute, AN SSSR)

SUBMITTED: 01Jun63

DATE ACQ: 18Mar64

ENCL: 00

SUB CODE: PH

NO REF SOV: 002

OTHER: 004

Card 2/2

TUMANOV, P.

Indissoluble union... Sov. profsoiuzy 18 no.24:18-19 D '62.
(MIRA 16:1)

1. Zaveduyushchiy otdelom po voprosam raboty Sovetov
Prezidiuma Verkhovnogo Soveta SSSR.

(Russia--Politics and government)

TUMANOV, P.A.; LYASHENKO, A.I.

Stratigraphy of the middle Devonian in the southwestern Timan
region, Dokl. AN SSSR 113 no.6:1338-1341 Ap '57. (MIRA 10:6)

1. Institut nefti Akademii nauk SSSR. Predstavleno akademikom D.V.
Nalivkinym.

(Timan Ridge--Geology, Stratigraphic)

AUTHOR
TITLE

TUMANOV, P.A., LYASHENKO, A.I.

20-6-43/59

The Stratigraphy of the middle Devonian in the South-eastern
Near-Timan Region. (Stratigrafiya srednego Devona yugo-
vostochnogo Pritiman'ya.- Russian)
Doklady Akademii Nauk SSSR 1957, Vol 113, Nr 6, pp 1338 - 1341
(U.S.S.R.)

ABSTRACT

The stratigraphic scheme of the Devonian in the South-Timan
region was worked out by the geologists of Ukhta and further-
more detailed for the upper Devonian. The deposits of the middle
Devonian were sorted out as Chibys-suite. In recent years
Devonian marine olayey-carbonaceous deposits, well characterized
by fauna, were discovered by means of bore holes on the south-
eastern slopes of Timan. They were counted to the Chibys-suite
and compared with the Staro-Oskol strata. Kernematerial was col-
lected and investigated by the first author from the Verkhneiz-
hemsk district. A number of lithologic horizons were sorted out.
These data abruptly change the hitherto existing opinions con-
cerning the rock age and facilitate an essential particularization
of the stratigraphy. Thanks to the existence of a mixed fauna
of the Ural- and plateau type, comparison between the middle
Devonian deposits of the central parts of the Russian Plateau

CARD 1/3

20-6-43/59

The Stratigraphy of the middle Devonian in the South-Eastern Near-Timan region.

and the Ural could be exactly defined. Pechora-horizon. The basal sandy -clayey mass of the middle Devonian lies on an eroded surface of older deposits of different ages with an angular discordance. Many remnants of psilophyte flora are found. The horizon is to be classed among the lower Eifel stratum. On it there is a stratification of a thick carbonaceous-clayey mass for the 3 horizons of which the following 3 terms are suggested: Soyva-horizon (15 - 20 m thickness). Because of the flora this horizon is also to be classed among the Eifel substratum. Kedrov-horizon (6-12 m thickness). According to rich and manifold fauna the Eifel age of the Mors-horizon can be determined with certainty. Omra-horizon (40-50 m thickness). It is possible that it corresponds to the infradomanio. The terrigenous mass lying on it was counted among the upper Devonian by Ukhta-geologists. Furthermore it is shown that the main part of these deposits belongs to the middle Devonian. Their lower part apparently corresponds to the Vorobyev-horizon. For the upper part the name: Troitskiy horizon is suggested. It lies transgressively on lower strata (85 m thickness). Poor fauna, chiefly Lingula and phyllo-pods. The upper part of the terrigenous mass, counted to the

CARD 2/3

20-6-43/59

The Stratigraphy of the middle Devonian in the South-eastern
Near-Timan Region.

Pashiysk-suite by the geologists of Ukhta, already belongs
to the upper Devonian. (1 stratigraphic scheme, 4 Slavic
references.)

ASSOCIATION: Petroleum Institute of the Academy of Science of the U.S.S.R.
PRESENTED BY: D.V. NALIVKIN, Member of the Academy.
SUBMITTED: -
AVAILABLE: Library of Congress.

CARD 3/3

TUMANOV, P.A.

Lower and middle Paleozoic sediments in the eastern Timan Ridge
region in connection with oil and gas potentials. Trudy Inst.
geol. i razrab. gor. iskop. 1:28-51 '60. (MIRA 14:1)
(Timan Ridge region--Geology, Stratigraphic)

TUMANOV, P.A.

Old sediments of the sedimentary cover of the Timan-Pechora oil-
and gas-bearing province. Trudy MINKHIGP no.25:185-203 '59.
(MIRA 15:5)

(Pechora Valley--Petroleum geology)
(Pechora Valley--Gas, Natural--Geology)
(Timan Ridge--Petroleum geology)
(Timan Ridge--Gas, Natural--Geology)

YEFREMOV, Ye.A., nauchnyy sotrudnik; TSIKERMAN, L.Ya., nauchnyy sotrudnik;
TUMANOV, P.A.

Automatic and remote control of underground installations in municipal
sewers. Gor. khoz. Mosk. 32 no.9:27-31 S '58. (MIRA 11:9)

1.Akademiya kommunal'nogo khozyaystva imeni K.D. Panfilova (for
Yefremov, TSikerman). 2.Glavnyy inzhener Kontory ekspluatatsii
vodostokov i kollektorov (for Tumanov).
(Sewers, Concrete) (Remote control) (Automatic control)

TUMANOV, P. A., Candidate Geolog-Mineralog Sci (diss) -- "The oil-and-gas content of the Middle Devonian deposits of the northeastern slope of the southern Timan". Moscow, 1959. 16 pp (Acad Sci USSR, Inst of Geology and Exploitation of Mineral Fuels), 250 copies

TUMANOV, P.A.

ZAYDMAN, Ya.A., inzhener; TUMANOV, P.A., inzhener.

Use of collecting channels for underground installations. Gor.khoz.
Mosk.29 no.1:15-18 J '55. (MIRA 8:3)

(Moscow—Underground construction) (Moscow—Pipelines)

TUMANOV, Petr Aleksandrovich; SOKOLOV, V.L., otv. red.; KISEL'MAN, G.S.,
red. izd-va; YEGOROVA, N.F., tekhn. red.

[Oil potential of Middle Devonian sediments in the northeastern
slope of the southern Timan Ridge] Neftegazonosnost' srednedevon-
skikh otlozhenii severo-vostochnogo sklona Iuzhnogo Timana. Moskva,
Izd-vo Akad.nauk SSSR, 1962. 87 p. — Diagrams. 1-6, 8-9, 17-18.
(MIRA 15:7)

(Timan Ridge—Petroleum geology)
(Pechora Valley—Petroleum geology)

TUMANOV, R.I.

26(1,4)

PLANE I BOOK REFLATATION

Abdalya nauk 533R. Laboratoriya dvigatelya

26(1,4)

Teoriya, konstruktivnyye, raschet i ispytaniya dvigatelya vnutrennego
soplyava (Theory Design, Calculation, and Testing of Internal
Combustion Motors) Moscow, Izd-vo AN SSSR, 1958. 174 p. (Series:
Ist. Trudy, vyp. 4) Kratka slup inserted. 3,000 copies printed.

Ed. of Publishing House: V.M. Klenikov; Tech. Ed.: T.A. Prusakov;
Editorial Board: M.D. Aashev, Doctor of Technical Sciences, M.M.
Zagryadkin, Candidate of Technical Sciences, Yu. B. Sviridov,
Candidate of Technical Sciences, S.S. Irtutsev, Engineer, and
K.G. Yevgrafov, Engineer.

PURPOSE: This book is intended for workers of scientific research
institutes, students of schools of higher education (vuzes), de-
sign bureaus, and to promote exchange of experimental information
on the thermodynamics of internal combustion engines.

COVERAGE: This collection consists of 14 articles based mainly on
research work done by the author in 1955-1956. Part I is devoted
to working processes in gas turbine power plants and to theoretic-
cal and experimental work connected with investigation of the flow
of gases. Part II contains articles on the investigation of pro-
cesses in piston engines. Part III deals with the measurement of
high temperatures of gases. The collection is number 4 of the
Transactions of the Engine Laboratory of the Academy of Sciences,
USSR. No personalities are mentioned. There are 10 references.

4. Markulov, I.A., and R.I. Tumanov (deceased). Calculation of
Gas Characteristics in an Adiabatic Process With Changing Heat
Capacity Taken Into Consideration
The equation obtained of the adiabatic curve of a gas with
changing heat capacity and its graphical representation make
possible a rapid and easy calculation of the gas charac-
teristics of gas and the combustion products of kerosene.
Changes of temperature in the adiabatic process are from 200°
to 2,500°K. There are 3 Soviet references.

5. Smolov, M.F., and I.I. Sazonov. Problems of the Theory of
Stabilization in Flame Stabilization Behind a Poorly Streamlined
Body.

The author states that the problem is very complicated, and
may be defined by a complex system of hydrodynamic, differential
equations and by chemical kinetics and diffusion. This ar-
ticle considers only stationary processes in which the fields
of components of velocity vectors, pressures, density, etc.,
are only functions of three-dimensional coordinates and are
independent of time. In these conditions it is impossible
necessary to formulate the initial conditions. Experiments
show that the flame stabilization is well achieved by poorly
streamlined bodies (stabilizers). In this case, the circula-
tion takes place behind the stabilizer is the ignition source. There
are 6 references: 4 Soviet, and 2 English.

6. Kalinin, K.F. Calculation of Hydraulic Losses in the Flow
of Gases in Heat Exchangers Through Channels of Lengthwise
Through Pipes

The article consists of two parts. The first presents a
method for calculating gas characteristics for any system of
flows in the outlet from a heat exchanger. The second part
transfer data. Part two provides a method for calculating
gas characteristics in the outlet from circular pipes in heat
exchangers. It is possible to determine by the second method
the gas characteristics in the outlet without making a full
heat calculation and without knowing the length of pipes, and
in special cases without knowing the diameter of pipes.
It is also possible to determine the number directly in
the outlet and inlet according to the given hydraulic re-
sistance without making a heat calculation. There are 2
Soviet references.

MERKULOV, I.A.; TUMANOV, R.I. [deceased]

Calculating the parameters of a gas in adiabatic process taking into
consideration changes in heat capacity. Trudy Lab.dvig. no.4:32-43
'58. (MIRA 12:11)

(Thermodynamics)

TUMANOV, R.I.
DRIGGS, I.G. [Driggs, Ivan H.]; LANCASTER, O.Ye. [Lancaster, Otis E.];
MIRONOV, G.G. inzh. [translator]; TUMANOV, R.I., inzh. [translator];
SHENKIN, V.P., inzh. [translator]; YANOVSKIY, G.Yu., inzh., red.;
BOGOMOLOVA, M.F., red. izd-va; SHCHERBAKOV, P.V., tekhn.red.

[Gas turbines for aircraft. Translated from the English] Aviatsionnye
gazovye turbiny. Perevod s angliiskogo G.G.Mironova, R.I.Tumanova i
V.P.Shenkina. Moskva, Gos.izd-vo obor. promyshl., 1957. 338 p.
(Airplanes--Turbojet engines) (MIRA 11:2)
(Airplanes--Turbine-propeller engines)

TUMANOV, S. A.

21812

TUMANOV, S. A. O steklotsementnoy keramike. (Po povodu rabot I. I. Kitaygorodskogo i stati i V. V. Goncharova "O steklokeramike kak ognepornom materiale" v zhurn. "Ogneupory", 1949, No. 4.) Ogneupory, 1949, No. 6, s. 284-87.

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949

BC

B-1-7

Clays of the Gubinski deposits and their utilization in the ceramic industry. S. G. TUMANOV (Kosmos: Moskva, 1933, 9, No. 4, 18-19).—The principal types are (a) lean, sandy clays containing 30-60% of sand; (b) fat clays containing 0.4-5% of sand and much alkali, and having a refractoriness of 1600-1800°. Ch. Ann.

| 1ST AND 2ND ORDERS | | | | | | | | | | 100 AND 6TH ORDERS | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--|--|--|
| PROCESSES AND PROPERTIES INDEX | | | | | | | | | | | | | | | | | | | |
| <p>Chief defects of sappers and ways of eliminating them.</p> <p>G. Tumanyan, <i>Keram. i Stel' 9</i>, No. 7, 19-21 (1931).</p> <p>M. V. Komkoidy</p> | | | | | | | | | | | | | | | | | | | |
| <p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p> | | | | | | | | | | | | | | | | | | | |
| 1ST AND 2ND ORDERS | | | | | | | | | | 100 AND 6TH ORDERS | | | | | | | | | |
| 1ST AND 2ND ORDERS | | | | | | | | | | 100 AND 6TH ORDERS | | | | | | | | | |

19

6. Pink pigments for coloring porcelain masses. S. G. Tumanov. *Keramika* 1939, No. 11-12, 12-17; *Khim. Refert. Zhur.* 1940, No. 7, 99.—A review of methods for the production and use of pink pigments. Methods for prepg. pigments on the base of Mn and Al phosphates, their properties, and the burning of porcelain conig. the pigment are described. Data are given comparing imported and domestic specimens. W. R. Hena

TUMANOV, S. G.

Preparation of cobalt blues and chrome pinks among mineral pigments of the spinel type. S. G. Tumanov (D. I. Mendeleev Chem.-Tech. Inst., Moscow). *Doklady Akad. Nauk S.S.S.R.* 57, 69-72(1947).—Complete series of isomorphous types: $\text{CoO-Al}_2\text{O}_3$, $\text{CoO-MgO-Al}_2\text{O}_3$, $\text{CoO-ZnO-Al}_2\text{O}_3$, $\text{Al}_2\text{O}_3\text{-Cr}_2\text{O}_3$, $\text{MgO-Al}_2\text{O}_3\text{-Cr}_2\text{O}_3$, and $\text{ZnO-Al}_2\text{O}_3\text{-Cr}_2\text{O}_3$, were investigated. In most cases the products are of spinel type and the most uniform type is displayed by the pigments of the Zn series, which are also most stable to acids and have the most intense color; Mg pigments are

next in respect to color purity, followed by Co and Cr derivs. For most complete formation of spinels the best process is calcination of the components in the form of copptd. hydroxides. Also good results are obtained by calcining intimate mixts. of the oxides with boric acid at 1300° . Heating mixts. of CoO and Al_2O_3 in various ratios for 0.5 hr. at 1300° gave a series of blue pigments with formation of spinel being pronounced at component ratios close to that of spinel; n_D of products rises with content of Co. When B_2O_3 is added to a 1:1 $\text{CoO-Al}_2\text{O}_3$ for the calcination step, complete formation of spinel takes place and the product has n_D 1.81. In the $\text{CoO-MgO-Al}_2\text{O}_3$ series little spinel forms at 1300° but when 2% H_3BO_3 is added the pigments become uniform and more intensely colored; if part of the CoO is replaced by MgO uniform light-colored pigments result. H_3BO_3 greatly enhances the formation of blue color by increased temp. of calcination. The $\text{CoO-ZnO-Al}_2\text{O}_3$ series shows more pigmentation than the Mg series and better uniformity; in presence of B_2O_3 a more complete formation of spinel is observed even at 560° . In the ruby color series addn. of 0.5-50% Cr_2O_3 in respect to Al_2O_3 was studied; max. color is reached at 10%, and further increase of concn. gives light-green, then deep-green color. However, with B_2O_3 present, the red color is maintained even at 25% Cr_2O_3 , and calcination at 1300° is practical. G. M. K.

TUMANOV, S.G., doktor tekhn. nauk; BULAVIN, Yu.I.

Increase of the whiteness of enamel coatings on aluminum.
Stek. i ker. 20 no.9:29-30 S '63. (MIRA 17:6)

1. Dulevskiy krasochnyy zavod.

TUMANOV, S.G.

Chemical Abst.
Vol. 48 No. 6
Mar. 25, 1954
Glass, Clay Products, Refractories,
and Enameled Metals

Firing of fusible opaque zirconium glaze. S. G. Tumanov (2) 3
and A. A. Naibandyan. *Steklo i Keram.* 10, No. 1, 16-18
(1963). Prolonged holding at 1000° improves the surface
and luster of boro-Zr glaze, but opacity and whiteness are
impaired. Prolonged holding during cooling impairs the
surface and causes crystal. Optimum heat cycle includes
holding at 1000° for 0.5-1 hr. and cooling in a short period
(up to 1 hr.). Microscopic study reveals that opacity is
caused by Zr, accumulation of fine-grained needle-like
crystals of unknown origin, and quartz. B. Z. Kamich. 7-4-54

TUMANOV, S. G.

USSR/Miscellaneous - Porcelain

Card 1/1 Pub. 104 - 8/11

Authors : Tumanov, S. G., Prof. Dr. Tech. Sc., and Kirillova, M. G.

Title : Individual porcelain mass processing methods and their effect on the properties of porcelain

Periodical : Stek. i ker. 2, 23 - 26, Feb 1955

Abstract : Comparative tests were conducted to determine the effect of individual porcelain mass processing methods on the final qualitative indices of porcelain with special consideration of the steaming method. Results indicate that such porcelain mass processing methods as: 90-day aging, preliminary heating in liquid state to 30-40° for a period of 24 hrs., or passing through a vacuum will do increase the mechanical stability of the mass both in air-dry and in calcined states. Tables.

Institution:

Submitted:

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757420011-3

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001757420011-3"

2.895, and 2.894, respectively. 4 figures BZK F-11

LEVIN, P.A.; TURIANOV, S.O.

Solvents, polymers, and other components for liquid polishing
gold. Zhur. prikl. khim. 38 no. 10:2264-2269 0 '65.

(MTPA 18:12)

1. Submitted Sept. 2, 1963.

ACC NR: AP5025658

SOURCE CODE: UR/0080/65/038/010/2264/2269

AUTHOR: Levin, P. A.; Tumanov, S. G.

ORG: none

TITLE: Solvents, polymers and other component parts of gilding solutions

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 10, 1965, 2264-2269

TOPIC TAGS: gold, porcelain, metal coating, ceramic coating

ABSTRACT: The purpose of this investigation was to develop gilding solutions which would spread easily, not flow outside the coverage areas and make no runs, but form films uniform in thickness. Resins, solvents and other components must be sufficiently stable on storage and must have the required consistency and adhesion to porcelain prior to kiln drying. The tests were conducted with rosin, shale pitch, Syrian asphalt, bitumen, phenolformaldehyde resin, polymethyl- and polybutylmethacrylate, PKhV-4 and PKhV-11 resins, copal, cumarone resin, shellac, acetyl and ethylcellulose. The following solvents were used: turpentine, aromatic and chlorinated hydrocarbons (benzene, toluene, chloroform, chlorobenzene and others), tetrahydronaphthalene, cyclohexanol, cyclohexanone, nitrobenzene, ethylbenzoate, etheral oils and others. Some polymers along with the formation of a film also decrease the gloss of the gold deposit in the course of kiln drying. This property of gilding preparations depends on

UDC: 621.793 + 546.59

Card 1/2

L 8902-66

ACC NR: AP5025658

2
the solvents which are present. The replacement of soluble metal compounds by insoluble metal compounds or the use of inert solvents improves the properties of gilding preparations. The use of surfactants and stabilizing additives has an adverse effect on the properties of fired gold paint. The authors express their gratitude to P. P. Budnikov for consultations in the course of these investigations. Orig. art. has: 3 tables, 2 figures.

SUB CODE: 11/

SUBM DATE: 02Sep63/

ORIG REF: 003/

OTH REF: 000

PC
Card 2/2

LEVIN, P.A.; TUMANOV, S.G.

Incombustible components of a preparation of liquid polishing
gold. Zhur. prikl. khim. 37 no.12:2752-2754 D '64. (MIRA 18:3)

TUMANOV, B.G., doklady Akademika VSEVOZRASHNIY, V.G.

Obtaining new chrome pigments of the optical type. Part 1. Ser. 22
no. 6:2-5 Ja '65. (MIRA 13:6)

1. Palevskiy krasochenny zavod.

LEVIN, P.A., inzh.; TUMANOV, S.G., doktor tekhn. nauk

Liquid gold preparations for decorating purposes. Stok. 1
ker. 21 no.7:33-35 JI '64. (MIRA 17:10)

1. Dulevskiy krasochnyy zavod.

TUMANOV, S.G., doktor tekhn.nauk

Research by the Dulevo coloring plant for developing the
production of colors and decalcomania. Stek.i ker. 21 no.9:
20-22 S '64. (MIRA 18:4

TUMANOV, S.G., doktor tekhn.nauk, prof.

We answer readers' questions. Stek.l ker. 19 no.11:43 N '62.
(MIRA 15:12)

(Glass research)

(Ceramics)

TUMANOV, S.G., doktor tekhn.nauk prof.

Liquid gold preparation for glass and porecelain. Stek. 1
ker, 18 no.6:26-30 Je '61. (MIRA 14:7)
(Glass, Colored)

TUMANOV, S.G., doktor tekhn.nauk

Making purple lustre for painting glass and porcelain. Stek. 1
ker. 17 no.12:18-22 D '60. (MIRA 13:11)
(Glass painting and staining)

15 (2)

AUTHORS:

El'kinson, R. Z., Professor, Doctor
of Technical Sciences, Tumanov, S. G.

SOV/72-59-5-2/18

TITLE:

The Use of Vibration for Molding Ceramic Products by the
Cast Method (Primeneniye vibratsii pri oformlenii
keramicheskikh izdeliy metodom lit'ya)

PERIODICAL:

Steklo i keramika, 1959, Nr 6, pp 7-12 (USSR)

ABSTRACT:

The paper by Z. A. Nosova and T. Kh. Fedorova (NII
Stroykeramika) states that the vibration for speeding up the
molding of ceramic sanitary-building materials is suitable
only in the case that pre-heated slime and pastes having a
reduced content of aluminous components be used. Since quite
a number of questions could not be solved in that
investigation, the NII Stroykeramika carried through some
investigations which are the subject of this article. The
table shows the composition of the pastes employed. Soluble
glass and calcinated soda have been added to the slime as
diluting electrolytes. Investigations on the vibration effect
have been undertaken on a vibrating plate designed by
A. Ye. Desov and P. S. Kuznetsov (Footnote 1) and equipped
with a mechanical drive of the type constructed by the

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engineers L. G. Brodskiy and A. A. Velikzhaninov of the PKB NII Stroykeramika. Amplitude and frequency of vibrations has been measured with the manual vibrograph VG-1. The authors refer in this respect to the papers by Yu. I. Iorish (Footnote 2). Figures 1 and 2 give information regarding the vibration influence on paste filtration. Professor V. A. Chernov recommended a method for determining the combined water content in the slime. Figure 3 shows that a reduction of the slime's initial moisture considerably slows down the filtration speed of all pastes investigated. According to the paper by A. V. Dumanskiy (Footnote 3) this is due to the reduction of the quantity of combined water in the initial suspension. The mechanical resistance of the molded piece immediately after extraction from the plaster mold has been determined according to the method of the Academician P. A. Rebinder with a conical meter for measuring plasticity designed by M. P. Volarovich and S. N. Markov, in which connection the authors of this article refer to the papers by I. A. Al'perovich, P. I. Berenshteyn, G. S. Blokh, I. K. Antonevich and I. M. Gorkova (Footnotes 4 and 5). The values

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measured are summarized in figure 4. Figures 5 and 6 show the dependence of mechanical resistance on the vibration amplitudes. Conclusions: The influence of vibration increases the filtration speed only slightly and is practically of no influence on the general rate of moisture delivery. The use of the vibration method favors the moisture delivery thus reducing the residual moisture of the molded piece. The action of vibration increases the mechanical resistance of the molded piece which gives the possibility of using pastes having a reduced portion of aluminous components. This method allows molding of slimes having a temperature ranging between 40 and 60 centigrades. There are 6 figures, 1 table, and 5 Soviet references.

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TUMANOV, S.G., doktor tekhn.nauk; VORONKOV, G.N., kand.tekhn.nauk;
MASLENNIKOVA, G.N., kand.tekhn.nauk; TITOVA, V.G., inzh.

Zirconium porcelain. Trudy GIEKI no.2:14-20 '57. (MIRA 11:7)
(Porcelain) (Zirconium)

TUMANOV, S.G., doktor tekhn.nauk; MASLENNIKOVA, G.N., kand.tekhn.nauk

Investigating ceramic materials on the basis of spodumene.

Trudy GIEKI no.2:83-92 '57.

(MIRA 11:7)

(Ceramic materials) (Spodumene)

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